

P a t e n t C l a i m s :

1. A method in the compensation of nonlinearities in an
5 amplifier consisting of a pulse-width modulator (4),
wherein a signal is pulse-width modulated to provide a
pulse-width modulated small-signal (5), and wherein the
pulse-width modulator (4) has an output controlling a set
of change-over switches (6) which feed a load (9) with a
10 pulse-width modulated great-signal (7) by means of a
voltage supply (12), c h a r a c t e r i z e d in that
the inevitable error, which manifests itself in that the
pulse widths of the pulse-width modulated great-signal
(7) differ from the pulse widths of the pulse-width modu-
15 lated small-signal (5), is detected as an error signal
which is used for changing the pulse-width modulation,
said pulse-width modulated small-signal being varied in a
manner which corresponds to the detected error signal.
- 20 2. A method according to claim 1, c h a r a c t e r -
i z e d in that the error signal is detected as a multi-
plicative error signal.
3. A method according to claim 2, c h a r a c t e r -
25 i z e d in that the detected multiplicative error signal
is determined as the pulse-width modulated small-signal
multiplied by the pulse-width modulated great-signal and
the inverted small-signal multiplied by the inverted
pulse-width modulated great-signal.
- 30 4. A method according to claims 1-3, c h a r a c t e r -
i z e d in that the pulse-width modulation is performed
by means of a carrier wave signal.
- 35 5. A method according to claim 4, c h a r a c t e r -

i z e d in that a saw-toothed or triangular carrier wave signal is used.

6. A signal according to claim 5, c h a r a c t e r -
i z e d in that the slew rate of the carrier wave signal
5 is adjusted with an external signal.

7. An amplifier of the type comprising a pulse-width modulator (4) adapted to pulse-width modulate a signal to provide a pulse-width modulated small-signal (5), said
10 pulse-width modulated signal being fed to at least two change-over switches (6) adapted to connect and disconnect a voltage supply (12) to form a pulse-width modulated great-signal, and having means to compensate for error signals which occur in the signal paths between the
15 pulse-width modulated great-signal (7) and the pulse-width modulated small-signal (5), c h a r a c t e r -
i z e d in that the means for compensating for the error signals are formed by a detector (10) which is adapted to detect deviations between the pulse widths of the great-
20 signals and of the small-signals, and that the output of the detector (10) is connected to a controlled carrier wave generator (11).

8. An amplifier according to claim 7, c h a r a c -
25 t e r i z e d in that the detector (10) is adapted to multiply the pulse-width modulated small-signal with the pulse-width modulated great-signal and to multiply the inverted pulse-width modulated small-signal with the inverted pulse-width modulated great-signal.

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9. An amplifier according to claim 7 or 8, c h a r a c -
t e r i z e d in that the controllable carrier wave generator (11) is adapted to keep the frequency of the carrier wave constant.

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10. An amplifier according to claims 7-9, c h a r a c -
t e r i z e d in that the controllable carrier wave gen-
erator (11) is adapted to change the slew rate of the
carrier wave on the basis of the detected multiplicative
5 error signal.

11. Use of a method and an amplifier according to claims
1-10 in a negative feedback system.

10 12. Use of a method and an amplifier according to claims
1-10 for the power control of resistive and reactive
loads.